

## SUPPLIER NOTIFICATION REQUIREMENT

### SARA Title III

This product contains a toxic chemical or chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Because Jones Chemicals is in Standard Industrial Classification codes 20 through 39, manufactures or processes this toxic chemical, and sells or otherwise distributes this mixture or trade name product containing a toxic chemical to you, we are required to give you this notification under SARA Title III.

This notification is required to be made each year with at least the first shipment of each mixture or trade name product to each recipient beginning January 1, 1989.

This notification must not be detached from this Material Safety Data Sheet (MSDS). Any copying and redistribution of this MSDS shall include copying and redistribution of this notification attached to copies of the MSDS subsequently redistributed.

This mixture or trade name product contains the following toxic chemicals:

SARA TITLE III TOXIC CHEMICAL	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER (CAS #)	PERCENT BY WEIGHT OF TOXIC CHEMICAL
Sulfuric Acid	7664-93-9	66° Be (93%)

**MATERIAL SAFETY DATA SHEET**

UNOCAL CHEMICALS DIVISION/NITROGEN GROUP

MSDS NO.

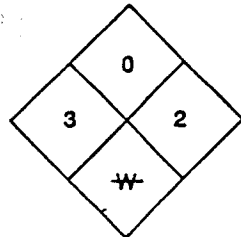
1.0

PRODUCT CODE NO.\*

311,312,322

CAS REG. NO.

9664-93-9

<b>MANUFACTURER</b> UNOCAL CHEMICALS DIVISION, NITROGEN GROUP UNION OIL COMPANY OF CALIFORNIA 1201 W. 5TH STREET LOS ANGELES, CALIFORNIA 90017  CONTACT: MSDS COORDINATOR - (213) 977-7197		<b>Transportation Emergencies:</b> Call CHEMTREC (800) 424-9300 For AK & HI: (202) 483-7616  <b>Health Emergencies:</b> Call Los Angeles Poison Information Center (24 hrs.) (213) 664-2121		
<b>PRODUCT</b>	SULFURIC ACID			
<b>COMMON NAME</b>	SULFURIC ACID			
<b>GENERIC NAME</b>	SULFURIC ACID			
<b>CHEMICAL NAME</b>	SULFURIC	<b>CHEMICAL FORMULA</b>	H <sub>2</sub> SO <sub>4</sub>	
<b>CHEMICAL FAMILY</b>	INORGANIC ACID			
<b>DOT PROPER SHIPPING NAME</b>	SULFURIC ACID	<b>HAZARD CLASS</b> CORROSIVE	<b>ID NUMBER</b> UN1830	<b>LABEL</b> CORROSIVE
<b>WARNING STATEMENTS</b>				
<p><b>DANGER CAUSES SEVERE BURNS.</b></p> <p>Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Do not taste or swallow. Keep system or container closed. Use with adequate ventilation Wash thoroughly after handling. <b>FOR INDUSTRIAL USE ONLY.</b></p>			<p><b>NFPA</b> Hazard Identification</p> 	
<b>SECTION I - INGREDIENTS</b>		<p>*THRESHOLD LIMIT VALUE SET BY: A. OSHA B. ACGIH C. SEE SECTION III D. OTHER NE. NOT ESTABLISHED UNITS ARE IN ppm UNLESS SPECIFIED OTHERWISE. x TLV*</p>		
Concentrated Sulfuric Acid		93 to 98	8hr. TWA 1 mg/m <sup>3</sup> ,A,B	

**SECTION II - EMERGENCY AND FIRST AID PROCEDURES**EMERGENCY: HAVE PHYSICIAN CALL LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.) (213) 664-2121

EYE CONTACT	***CORROSIVE MATERIAL. ACID BURNS.*** Immediately move victim away from exposure and into fresh air. For all contact, immediately flush affected eye(s) with clean water for at least 30 minutes. Seek immediate medical attention.
SKIN CONTACT	***CORROSIVE MATERIAL. ACID BURN.*** Immediately move away from exposure to mists. For all contact, immediately flush affected skin area(s) with large amounts of water while removing contaminated clothing. If skin surface is damaged, apply a clean dressing and seek immediate medical attention. Wash contaminated clothing and thoroughly clean shoes before reuse.
INHALATION	***CORROSIVE MATERIAL. ACID BURNS.*** Immediately move away from exposure and into fresh air. If victim is not breathing or if breathing difficulties develop, artificial respiration or oxygen should be administered by qualified personnel. Seek immediate medical attention.
INGESTION	***DO NOT INDUCE VOMITING. CORROSIVE MATERIAL. ACID BURNS.*** If victim is conscious and alert, give 2 to 3 cups of milk or water to drink. Follow with raw eggs beaten in milk if available. Seek immediate medical attention. To Physician: Late complications of acid poisoning may produce esophageal, gastric and pyloric stricturing and stenosis which may require surgical repair.

**SECTION III - PHYSIOLOGICAL EFFECTS AND HEALTH INFORMATION**

EYE EFFECTS	THIS MATERIAL IS CORROSIVE AND MAY CAUSE ACID BURNS. Direct contact with the liquid or exposure to its mists can be severely irritating to the eye(s) and may result in chemical burns, corneal ulceration and irreversible eye damage.
SKIN EFFECTS	THIS MATERIAL IS CORROSIVE AND MAY CAUSE ACID BURNS. Direct contact with the liquid or its mists can be severely irritating to the skin and may result in redness, swelling, skin burns, blistering and severe skin damage.
INHALATION	THIS MATERIAL IS CORROSIVE AND MAY CAUSE ACID BURNS. Exposure to mists can be severely irritating and cause burns to the mouth, nose or throat. Severe exposures may result in swelling and closing of the windpipe and corrosive damage to the lungs and upper respiratory tract.
INGESTION	THIS MATERIAL IS CORROSIVE AND MAY CAUSE ACID BURNS. Accidental ingestion of this material may cause burns and corrosive damage to the lips, mouth, throat, esophagus, stomach and intestines.
COMMENTS	Severe exposure can result in more serious damage including inflammation and accumulation of fluid in the lungs, perforation of the stomach and esophagus, and a narrowing or closing of the esophagus

**SECTION IV - SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION	Depending on the airborne concentration (see Section I exposure limits), use a filter-type respirator or gas mask with appropriate cartridges and canisters (NIOSH approved, if available) or supplied air equipment.
VENTILATION	If current ventilation practices are not adequate in maintaining airborne concentrations below established exposure limits (see Section I), additional ventilation or exhaust systems may be required.
PROTECTIVE GLOVES	The use of acid resistant gloves is recommended to prevent skin contact, irritation and possible acid burns.
EYE PROTECTION	Chemical goggles and face shields are recommended to safeguard against potential eye contact, irritation and injury.
OTHER PROTECTIVE EQUIPMENT	Sink, shower and eye-wash should be available in the work area for flushing eyes and skin. Acid resistant boots and aprons are recommended when handling this product.

**SECTION V - REACTIVITY DATA**

STABILITY	Stable
CONDITIONS TO AVOID	N/A
INCOMPATIBILITY MATERIALS TO AVOID	Avoid contact with bases or water. Avoid contact with strong oxidizing agents. Avoid contact with nitrates, hypochlorite (i.e. chlorine bleaches), sulfides, and cyanide which will generate toxic gases. Will attack metals to release flammable hydrogen gas. Diluted sulfuric acid will attack mild steel.
HAZARDOUS DECOMPOSITION PRODUCTS	Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide. Also major amounts of sulfur oxides may form.
HAZARDOUS POLYMERIZATION	Will not occur
CONDITIONS TO AVOID	N/A

**SECTION VI - SPILL OR LEAK PROCEDURES**

HIGHWAY OR RAILWAY SPILLS, CALL CHEMTREC (800) 424-9300 FOR AK & HI:  
(202) 483-7616

PRECAUTIONS IN CASE OF RELEASE OR SPILL	Isolate spill area and restrict entry. Stay upwind and away from spill unless wearing self-contained breathing apparatus. Stop and/or contain discharge if it can be done safely. Keep out of drains, sewers or waterways. Do not use water on spilled sulfuric acid. NOTE: Sulfuric acid is extremely slippery. Take up with sand or other inert non-combustible material and place in sealable containers. Keep combustibles (wood, paper, oil) away from spilled material. Call fire authorities and local/state agencies. If spill in excess of EPA reportable quantity is made, immediately notify National Response Center (phone number 800-424-8802).
WASTE DISPOSAL METHOD	Dispose of product in accordance with local, county, state, and federal regulations.

**SECTION VII - STORAGE AND SPECIAL PRECAUTIONS**

HANDLING AND STORING PRECAUTIONS	Should storage be necessary, keep containers tightly closed, dry and away from heat sources. Keep away from strong oxidizing agents including oxygen and chlorine. Protect containers against physical damage. Sulfuric acid is highly corrosive to most metals.
OTHER PRECAUTIONS	Avoid inhalation of mist or vapors and personal contact with this product. Sulfuric acid is extremely slippery; do not step in spilled acid. Wash contaminated clothing and thoroughly clean shoes before reuse. Do not add water to concentrated acid. Do not smoke near product.

**SECTION VIII - FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY CLASSIFICATION	Will not burn	FLASH POINT RANGE	N/A
EXTINGUISHING MEDIA	Avoid water. This material will not burn. If involved in a fire, the use of dry chemical or CO <sub>2</sub> is recommended.		
UNUSUAL FIRE AND EXPLOSION HAZARDS	This material will not burn, but if involved in a fire may release hazardous sulfur oxide fumes. This material may ignite combustibles.		
FIRE FIGHTING PROCEDURES	The use of a self-contained breathing apparatus (SCBA) and full protective clothing is recommended for firefighters. Use water on combustibles burning but avoid use of water directly on acid as it results in evolution of heat and causes splattering.		

**SECTION IX - PHYSICAL DATA**

APPROXIMATE BOILING RANGE 482°F	VAPOR DENSITY Greater than air	EVAPORATION RATE Less than water	PERCENT VOLATILE Negligible	SOLUBILITY IN WATER 100%
SPECIFIC GRAVITY 1.82	APPROXIMATE BULK DENSITY 15.2 lbs./gal.			
APPEARANCE AND ODOR	This material is a clear, viscous, oily appearing liquid with a pungent odor.			

**SECTION X - DOCUMENTARY INFORMATION**

PRODUCT CODE NO. 311,312,322	ISSUE DATE 1/10/86	REPLACES MSDS NO. N/A	PREVIOUS PRODUCT CODE NO. N/A	PREVIOUSLY ISSUED N/A
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**DISCLAIMER OF EXPRESS AND IMPLIED WARRANTIES**

The information in this document is believed to be correct as of the date issued. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and the product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.